

Application Number 10/731,867
Amendment dated June 14, 2007
Responsive to Office Action mailed 1/17/2007

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): An implantable medical device comprising:
a plurality of interconnected modules, each of the modules comprising a respective one of a plurality of housings; and
an overmold that at least partially encapsulates each of the housings,
a therapy delivery element to deliver a therapy to a brain of a patient; and
control electronics to control the delivery of the therapy by the therapy delivery element,
wherein the therapy delivery element and control electronics are located within one of the
modules,
wherein the housings are horizontally distributed at respective locations of the overmold, and separately encapsulated by the overmold, and
wherein the overmold is formed such that a surface of the overmold is concave along at least one axis prior to manipulation of the implantable medical device such that the surface is adapted to be implanted proximate to the a cranium of the patient.

Claim 2 (Original): The implantable medical device of claim 1, wherein the surface of the overmold is concave along two axes.

Claim 3 (Original): The implantable medical device of claim 1, wherein the overmold is flexible.

Claim 4 (Original): The implantable medical device of claim 1, wherein the overmold comprises silicone.

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Claim 5 (Original): The implantable medical device of claim 1, wherein the overmold comprises at least two materials.

Claim 6 (Previously Presented): The implantable medical device claim 1, wherein the surface of the overmold is concave such that the surface is adapted to conform substantially to the cranium.

Claim 7 (Previously Presented): The implantable medical device of claim 1, wherein the surface of the overmold is concave such that the overmold conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 8 (Original): The implantable medical device of claim 7, wherein the radius of the arc is approximately equal to 7 centimeters.

Claim 9 (Previously Presented): The implantable medical device of claim 7, wherein the surface comprises a first surface of the overmold, and a second surface of the overmold that is adapted to be implanted distal from the cranium substantially conforms to the arc prior to manipulation of the implantable medical device.

Claim 10 (Original): The implantable medical device of claim 1, wherein the modules are positioned within the overmold in one of a triangular configuration and a linear configuration.

Claim 11 (Previously Presented): The implantable medical device of claim 1, wherein the overmold completely encapsulates each of the housings.

Claim 12 (Currently Amended): The implantable medical device of claim 1, wherein the overmold does not encapsulate a portion of each of the housings that is adapted to be implanted proximate to a the cranium of a the patient.

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Claim 13 (Currently Amended): The implantable medical device of claim 1, wherein the housing of each of the modules comprises a surface that is adapted to be implanted proximate to a the cranium, and the surface of the housing of at least one of the modules is concave along at least one axis prior to manipulation of the implantable medical device.

Claim 14 (Previously Presented): The implantable medical device of claim 13, wherein the at least one of the modules comprises a control module that includes control electronics, and the surface of the housing of the control module is concave along two axes.

Claim 15 (Currently Amended): The implantable medical device of claim 13, wherein the at least one of the modules comprises a power source module that ~~include~~ includes a battery with a wound coil construction, and the surface of the housing of the power source module and the wound coil battery are each concave along one axis prior to manipulation of the implantable medical device.

Claim 16 (Currently Amended): The implantable medical device of claim 13, wherein the at least one of the modules comprises a power source module that includes a battery with a foil pack construction, and the surface of the housing of the power source module and the foil pack battery are each concave along one axis prior to manipulation of the implantable medical device.

Claim 17 (Currently Amended): The implantable medical device of claim 13, wherein the at least one of the modules comprises a recharge module that includes a recharge coil for inductively receiving energy, and the surface of the housing of the recharge module and the coil are each concave along two axes prior to manipulation of the implantable medical device.

Claim 18 (Previously Presented): The implantable medical device of claim 13, wherein the surface of the housing is concave such that the surface is adapted to conform substantially to the cranium.

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Claim 19 (Original): The implantable medical device of claim 13, wherein the surface of the housing is concave such that the surface conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 20 (Original): The implantable medical device of claim 19, wherein the radius of the arc is approximately equal to 7 centimeters.

Claim 21 (Previously Presented): The implantable medical device of claim 19, wherein the surface of the housing comprises a first surface of the housing, and a second surface of the housing that is adapted to be implanted distal from the cranium conforms substantially to the arc.

Claim 22 (Currently Amended): The implantable medical device of claim 1, ~~further comprising:~~

~~a therapy delivery circuit to deliver stimulation to a brain of the patient; and
control electronics to control the delivery of stimulation by the therapy delivery circuit,
wherein the therapy delivery circuit and control electronics are located within one of the modules
wherein the therapy comprises stimulation.~~

Claim 23 (Previously Presented): An implantable medical device comprising a metallic housing that includes an outer surface that is adapted to be implanted on or recessed into a cranium of a patient, wherein the surface is concave along at least two axes such that the surface conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

Claim 24 (Original): The implantable medical device of claim 23, wherein the radius of the arc is approximately equal to 7 centimeters.

Claim 25 (Canceled).

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Claim 26 (Previously Presented): The implantable medical device of claim 23, wherein the surface of the housing comprises a first surface of the housing, and a second surface of the housing that is adapted to be implanted distal from the cranium conforms substantially to the arc.

Claim 27 (Original): The implantable medical device of claim 23, further comprising:
a therapy delivery circuit to deliver stimulation to a brain of the patient; and
control electronics to control the delivery of stimulation by the therapy delivery circuit,
wherein the therapy delivery circuit and control electronics are located within the housing.

Claim 28 (Previously Presented): The implantable medical device of claim 1, wherein at least two of the housings are metallic.

Claim 29 (Previously Presented): The implantable medical device of claim 28, wherein the at least two of the housings are hermetic and formed of titanium or stainless steel.

Claim 30 (Currently Amended): An implantable medical device comprising:
a plurality of interconnected modules, each of the modules comprising a respective one of a plurality of metallic housings; and
a flexible overmold that at least partially encapsulates each of the housings,
a therapy delivery element to deliver a therapy to a brain of a patient; and
control electronics to control the delivery of the therapy by the therapy delivery element,
wherein the therapy delivery element and control electronics are located within one of the modules.

wherein the overmold is formed such that a surface of the overmold that is adapted to be implanted proximate to a cranium of a the patient is concave along at least one axis prior to manipulation of the implantable medical device, and

wherein the surface of the overmold is concave such that the overmold conforms substantially to an arc, and a radius of the arc is within a range from 4.5 to 9.5 centimeters.

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Claim 31 (Previously Presented): The implantable medical device of claim 30, wherein the housings are horizontally distributed at respective locations of the overmold, and separately encapsulated by the overmold.

Claim 32 (Cancelled).

Claim 33 (Currently Amended): The medical device of claim ~~32~~ 1, further comprising a power source located within the housing of one of the modules.

Claim 34 (New): The implantable medical device of claim 30, wherein the therapy comprises stimulation.